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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,602	11/18/2003	Min-Ho Park	P-0568	2942
34610	7590	05/17/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			DUONG, HUNG V	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/714,602

Applicant(s)

PARK, MIN-HO

Examiner

Hung v. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 1/10/06; 1/12/06.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**HUNG VAN DUONG**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 11-12, 14-15, 18, 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Park (US Pat. 6,968,054).

Regarding claims 1-7, 11-12, 14-15, 18, 21-22 Park discloses a keypad of a portable wireless terminal, comprising: a sheet 151 having a plurality of holes 101b; and a plurality of keys 150 fastened within respective ones of the holes 101b, wherein the sheet 151 supports the keys 150 within a housing of the portable wireless terminal wherein keys 150 include stopping portions 153 which fasten the keys 150 within respective ones of the holes 101b wherein the stopping portions 153 are integrally formed with the keys 150 wherein the stopping portions and the keys are made from a same material wherein the stopping portions are located at lower surfaces of the keys (see figure 2) wherein each key 151 includes a recess for receiving a portion of the sheet near the hole, and wherein portions of the key 150 located above and below the

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recess contact the portion of the sheet 151 near the hole 101 wherein the portions of each key 151 located below the recess defines a stopping portion for holding the key 150 within the hole 101b wherein the sheet is substantially parallel to a front case of the portable wireless device wherein the keys protrude above a front case of the portable wireless device.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pat. 6,968,054) in view of (CN2400887).

Regarding claims 8, 16 Park discloses all the subject matter of the claimed invention except for an adhesive layer adjacent a lower surface of the sheet and contacting lower surfaces of the keys, the adhesive layer providing additional force for holding the keys within the holes of the sheet. However (CN2400887) discloses an adhesive layer adjacent a lower surface of the sheet and contacting lower surfaces of the keys, the adhesive layer providing additional force for holding the keys within the holes of the sheet (see figure 3). Therefore, it would be obvious to one of ordinary skill

in the art to add an adhesive layer of (CN2400887) into Park' s keypad in order to be good fastened the key within the sheet.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pat. 6,968,054) in view of (CN2400887) and further in view of (CN1138170).

Regarding claim 9, Park and (CN2400887) disclose all the subject matter of the claimed invention except for the adhesive layer includes a plurality of protrusions aligned with respective ones of the keys. However (CN1138170) discloses the adhesive layer includes a plurality of protrusions aligned with respective ones of the keys (see figure 3). Therefore, it would be obvious to one of ordinary skill in the art to modify the adhesive layer includes a plurality of protrusions aligned with respective ones of the keys of (CN1138170) into (CN2400887) and Park' s adhesive layer in order to be good fixing in contact between the component.

5. Claims 10, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pat. 6,968,054) in view of (CN2400887) and further in view of Soloway et al (US Pat. 4,892,981).

Regarding claims 10, 17, Park and (CN2400887) disclose all the subject matter of the claimed invention except for the adhesive layer includes a silicon material. However Soloway et al disclose the adhesive layer includes a silicon material (see column 2, line 14). Therefore, it would be obvious to one of ordinary skill in the art to modify the adhesive layer includes silicon material of Soloway et al into (CN2400887) and Park' s adhesive layer in order to be good a common fabricated from elastomeric material.

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6. Claims 13, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pat. 6,968,054) in view of Soloway et al (US Pat. 4,892,981).

Regarding claims 13, 19-20 Park discloses all the subject matter of the claimed invention except for inserting the keys into the holes by an insert injection molding method, keys using a pin-point gate method or spraying the keys to enhance tactility of the keys. However Soloway et al disclose an insert injection molding method (see column 4, line 60), enhance tactility of the keys (abstract). Therefore, it would be obvious to one of ordinary skill in the art to utilize an insert injection molding method keys using a pin-point gate method or spraying the keys to enhance tactility of the keys of Soloway et al into Park's keypad in order to be good in fastening and enable a user to tactically respond to keys.

7. Claims 23-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US Pat. 6,968,054) figures 1-2 in view of figures 3-4.

Regarding claims 23-36 Park discloses all the subject matter of the claimed invention in figures 1-2, except for another sheet including a plurality of dome switches aligned with respective ones of the keys. However figures 2-3 discloses another sheet including a plurality of dome switches aligned with respective ones of the keys. Therefore, it would be obvious to one of ordinary skill in the art to modify another sheet including a plurality of dome switches aligned with respective ones of the keys of figures 2-4 into figures 1-2 in order to be good in contact and transferring the signal accordingly.

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8. Regarding method claims 12-20, and 29-36, the structure as mentioned above can perform the method claims.

***Response to Amendment***

9. Applicant's arguments with respect to claims 1-20, and new claims 21-36 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shoji (US Pat. 6,870,590) teaches electrical unit with a flexible board.

Cheng et al (US 2004/0203495) teach keypad structure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Duong whose telephone number is (571) 272-2041. The examiner can normally be reached on M-F from 8:30 to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on (571) 272-2092. The fax phone number for this Group is (571) 273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (866) 217-9197.

HVD

05/08/06.

A handwritten signature in black ink, appearing to read 'Hung V. Duong', with a long, sweeping horizontal stroke extending to the right.

Hung Duong  
Primary Examiner.